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RIGA PLANT IMPROVES HYDROTURBINES; INSTITUTE DEVELOPS NEW FURNACES

REDUCE WEIGHT, RAISE EFFICIENCY -- Moscow, Trud, 13 Jan 51

By comparison with 1940, the Riga Turbine-Machinery Plant has increased its volume of production several times and has tripled its labor productivity. The plant is now turning out turbopumps, compressors, spare parts for steam turbines, and modern hydroturbines for kolkhoz and interkolkhoz power stations. In conjunction with the All-Union Scientific Research Institute for Hydroturbine Building, the plant recently developed a new, smaller hydroturbine, which has made it possible to build power stations one fourth smaller than former ones. The weight of the machine per kilowatt of power was reduced to less than one fourth that of former models, and labor consumption in its manufacture was cut 30-50 percent. The efficiency of the new hydroturbines is 8 percent greater.

In the foundry, additional runners have been installed, and new molding machines and drying chambers have been built. Utilization of an oxygen blast in smelting modified pig iron has increased the output of acceptable pig iron 10 times, and greatly improved the quality of the castings.

For the machine shop, the plant has built special heads for milling and for vertical thread cutting, as well as cutters for high-speed methods. Electric-spark sharpening of tools has been introduced.

This year it is planned to turn to precision casting, a step which should increase productivity of labor 5-6 times. An effort will be made to save steel through the application of high-durability pig iron. This substitution should also speed production. For example, it should take one half the former time to finish the frame of a turbopump. The weight of a compressor frame will be reduced from 212 kilograms to 98. The machine's crank shaft will not be made of steel, as it was formerly, but of superhard iron. The diameter of the pistons will be changed, permitting use of standard compression and oil rings.

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It is estimated that revisions in the design of machines during this year will permit a 9-percent reduction in ferrous metal consumption, while the overall demand for nonferrous metals will go down 15 percent, and labor consumption will be cut 30 percent. -- N. Orlov, Chief Engineer

Moscow, Trud, 27 Dec 50

The Riga Turbine-Machinery Plant, one of the city's leading enterprises, has reduced the weight of one of its hydroturbines, and consequently cut the labor expended in its manufacture 30-50 percent. At the same time, the efficiency of the turbine was raised from 74 percent to 86 percent. The reduction made in the size of the turbine has cut the cost of building a power station to house it 25 percent. Thanks to the new, lighter machines, the enterprise has saved 3,547,000 rubles.

BOILER RUNS ON SAWDUST -- Leningradskaya Pravda, 20 Jan 51

The work of the Central Scientific Research Institute for Boilers and Turbines imeni Polzunov has contributed greatly to industrial advances in Leningrad. The shaft-mill furnace developed by the institute is distinguished by technical-economic indexes which are considerably higher than those of foreign models handling low-order fuels.

In conjunction with the Komega Plant, scientists designed a new mill for pulverizing lump coal. It requires one third as much metal to build as a ball mill, and cuts down the expenditure of electric power. Industry is in great need of such mills; they should find wide application in electric power stations, and in the construction industry.

A brigade of the institute, working with an electric power station of the Lenenergo Trust, has produced the first national cyclone furnace, featuring a so-called liquid slag removal. This type furnace will permit a considerable reduction in the dimensions of boiler aggregates and raise their efficiency especially in burning low-grade fuels. It is equipped with a cinder-catching element.

Workers of the institute, collaborating with the Forestry Engineering Academy imeni Kirov, have succeeded in putting into operation a steam boiler which burns sawmill sweepings.

BOILER WELDERS LEAD PLANT -- Frunze, Sovetskaya Kirgiziya, 11 Nov 50

The Novo-Troitsk Manchine-Building Plant has fulfilled the year plan early, with the boiler-welding shop, which retains the transferrable plant banner for the third consecutive month, leading the effort. The work of the machine-assembly shop has been outstanding.

On Stakhanovite proposed using an idle lathe for edging small boiler bottoms. The suggestion was carried out, and now one worker can perform the job which formerly required eight. Another worker developed a method of machining the flanges on a facing lathe. This method saves a considerable amount of metal The abrasiveless sharpening of cutters, put into practice by a third worker, has boosted labor productivity in this operation several times.

SHOPS SCORE IN METAL DRIVE -- Kiev, Pravda Ukrainy, 1 Nov 50

Participating in the local socialist competition for saving metal, the copper section of the T-5 shop in the Khar'kov Turbogenerator Plant imeni Kirov, has saved 5 tons of copper from its scrap. Before the end of the year, 2 more tons will be saved. The winding shop has also run up a considerable saving in metal during the drive.

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